Statement of

DAVID SATCHER, M.D., Ph.D.
ASSISTANT SECRETARY FOR HEALTH
AND
SURGEON GENERAL

U.S. Public Health Service
Department of Health and Human Services

Before the

UNITED STATES SENATE COMMITTEE ON FOREIGN RELATIONS
SUBCOMMITTEE ON AFRICAN AFFAIRS
U.S. Senate
Dirksen Senate Office Building
Washington, DC

Thursday, February 24, 2000
2:30 p.m.

INTRODUCTION

Thank you for the opportunity to come and speak with you as a physician and public health professional on the enormous unfolding global crisis of HIV/AIDS and its impact on Africa.
On January 10, 2000, the United Nations Security Council held a meeting focused on health – the first time ever in the history of the Council's 4,000 meetings which date back over a half century. I accompanied Vice President Gore to that meeting as part of his delegation. Never before had a sitting Vice President addressed the Council, not to mention a Surgeon General and Assistant Secretary for Health. Why does the United Nations consider the HIV/AIDS crisis a threat to security? In a word, instability. Not only has this pandemic wiped out soldiers and military personnel, but it has also impacted other professionals such as teachers, businessmen, and laborers who are vital to the future of a nation. HIV/AIDS is a serious public health problem of such magnitude that it threatens the very security of many African countries.

Both the dimensions of this epidemic, and the capacity of existing health care systems to halt its relentless march, demand urgent action to halt the toll of human suffering and loss of life. The attention that this Committee is devoting to the AIDS crisis in Africa is extremely valuable to the creation of new partnerships that can strengthen the global response to HIV/AIDS.

SCOPE OF THE EPIDEMIC

The HIV/AIDS epidemic will soon become the worst epidemic of infectious disease in recorded history. In the 1300s, the bubonic plague decimated the population of Europe with 20 million deaths, and the influenza epidemic of 1918-1919 killed more than 20 million people worldwide. At the end of 1999, 16.3 million people are estimated to have already died from AIDS worldwide and another 33.6 million individuals are living with HIV/AIDS. Without a cure in sight, the toll of AIDS in terms of lives lost is on a rapid rise.

Nowhere has the impact of the epidemic been more severe than in Africa. Of the 33.6 million people living with HIV, an estimated 23.5 million (nearly 70%) are in Africa. An estimated 13.7 million people have died of AIDS in Africa, over 80% of the deaths due to AIDS worldwide. In 1998 in Africa, when 200,000 people died as a result of armed conflict and war, AIDS alone killed 2.2 million people. The progression of this disease in Africa has outpaced all projections. In 1991 the World Health Organization projected that 5 million people would die of AIDS between 1991 and 1999, but half that number now die each year.

In many southern African countries, HIV/AIDS has become an unprecedented emergency, with one in four or five persons (20% - 26%) between the ages of 15 and 49 years living with HIV infection. Women are more heavily affected than men. New information suggests that between 12 and 13 African women are currently infected for every 10 African men; this disparity is greatest among girls aged 15 - 19, who are five or six times more likely to be HIV positive than boys their own age. The next generation of children of Africa will be doubly burdened by their own HIV infection, or by growing up without the nurture and protection of a parent.

HIV/AIDS also interacts with a number of other infectious diseases, such as tuberculosis and other sexually transmitted diseases. Individuals with immune systems weakened by HIV are more susceptible to infection with TB, and TB is widely prevalent across the African continent. HIV infection is also more easily transmitted in a setting of untreated sexually transmitted diseases. The predominant mode of HIV transmission in Africa is unprotected heterosexual intercourse, highlighting the importance of

prevention and early treatment of STDs as an HIV prevention strategy.

THE PUBLIC HEALTH APPROACH

The HIV/AIDS epidemic in Africa, as it has done throughout the world, has shown us the interrelationships of social behaviors, cultural and religious belief systems, and economic and political systems as they influence public health and the delivery of health care and prevention interventions. The traditional approach of public health is to:

- define the problem
- determine the risk factors or causes of the problem
- develop interventions and strategies to address the risk factors or causes, and
- implement interventions and evaluate their effectiveness

We have learned a great deal about the virus which causes HIV/AIDS, and a number of studies are ongoing to examine the specific subtypes of the virus which are most prevalent in Africa. Understanding the pathogenesis of infection, modes of transmission, and parameters of how infections are moving through a population serve as the cornerstone of a public health intervention. These basic science inquiries, and the equally important understanding of the behavioral risk factors and social contexts that facilitate continued spread of the disease, continue to inform the public health response to ending this tragic epidemic.

What is needed to overcome this expanding epidemic is a sustained orchestrated worldwide effort that includes elements of prevention, treatment and ultimately a preventive vaccine. Together, the world community can do this.

PREVENTION

Prevention is our first and best line of investment to end the global HIV/AIDS epidemic. As the world increasingly becomes a global village, an epidemic that continues unchecked in any region will ultimately affect us all. The good news is that we can change the future course of the HIV epidemic

through effective actions taken today. Over the last two decades we have learned many things, and there are many examples that demonstrate that the tide of HIV/AIDS can be turned. The challenge is to take this knowledge and support its application systematically, not in isolated communities or a few countries. Bringing prevention efforts up to a scale that can turn the tide of the HIV epidemic should be among our highest public health priorities.

Achieving the goals of prevention requires a number of elements: the availability of accurate information; the ability to act on that information without fear of stigma or prejudice; and the means to protect oneself from exposure to the virus. With respect to HIV/AIDS, it also means the ability of a mother to protect her unborn or newborn child from exposure to HIV before birth or through breast milk. The ability to screen and treat other sexually transmitted diseases also serves as a primary prevention tool for HIV.

Prevention efforts are most effective when they are grounded at the community level and responsive to the social and cultural contexts in which people live their lives. All too often, stigma and prejudice continue to preclude access to prevention information that can minimize the spread of infection. There are many examples of effective prevention efforts in Africa, as in Uganda – where the whole nation has mobilized to end stigma, urge prevention, and change behavior, with a resulting dramatic drop in the HIV infection rate. In Uganda, the HIV infection rates in certain antenatal clinics have decreased from 30% to 15% as a result of these efforts. Scientists and health professionals from the National Institutes of Health and the Centers for Disease Control and Prevention have worked in partnership with their Ugandan colleagues to evaluate the impact of prevention interventions and support research to develop new prevention tools. In Senegal, the religious and political leadership of the country joined together early in the epidemic to invest in getting prevention messages out, and the result has been one of the lowest HIV infection rates on the continent. These are but a few examples of some successes achieved on a continent where the epidemic is raging.

TREATMENT

There is also hope for people living with HIV/AIDS to live longer, healthier and more productive lives due to the discovery of new antiretroviral treatments, and effective drugs to treat common opportunistic infections which cause great suffering and early death. The natural course of HIV disease in the United States has seen a great change due to these therapies, with many more adults and children now living longer healthier lives, participating in their communities and the workforce, and parents caring for their children. Our ability to slow the progression of immune dysfunction, and to diagnose, prevent and treat the concurrent opportunistic infections has greatly decreased morbidity and mortality in the developed world.

One of the greatest successes has come in the ability to reduce transmission of HIV from mother to child, through HIV counseling, testing and use of antiretrovirals such as AZT and nevirapine.
In the United States, there has been a 72% decline in the number of HIV-infected babies born between 1992-1998 with the use of AZT in the prenatal, labor and delivery, and postpartum period. However this complex regimen is expensive and requires a level of medical infrastructure not available in many areas of the world. The urgency to develop affordable and practical therapeutic interventions for developing countries is profound. In some areas of sub-Saharan Africa, 30 percent or more of pregnant women are infected with HIV, and 25%-35% of their infants will be born infected. In response to this pressing need, a partnership effort between Uganda and NIH scientists identified a highly effective, safe and inexpensive drug regimen for preventing perinatal HIV transmission. Administration of one oral dose of Nevirapine to a mother at the onset of labor and another dose given to her baby, cut the rate of HIV transmission in half compared with a similar short course of AZT -- for a cost of $4.00 instead of the roughly $800 required for the AZT regimen now recommended in the United States. If widely implemented in developing countries, this intervention potentially could prevent some 300,000 - 400,000 newborns per year from beginning life infected with HIV.

To maximize the benefits of antiretroviral therapies, their safe and responsible use requires a level of medical care and infrastructure that presents an enormous challenge to the developing world. But first

steps can be taken by supporting the development of community-based capacities to diagnose HIV and provide low cost treatment for common opportunistic infections that kill prematurely and cause great suffering. It has been our experience that community-based services, built upon partnerships among existing community institutions, serve as the most effective and sustainable model to provide the net of prevention, health and social services vital to curtailing this devastating epidemic. As the Governments of Africa and their health leaders determine how best to involve communities, determine and address the needs of their people and what their systems can support, the worldwide public health community must stand ready to help.

VACCINE

The importance of developing an effective vaccine for HIV is paramount, as the greatest hope for ending the epidemic lies in this intervention. Vaccines have been the most significant public health intervention to eradicate or curtail the incidence of feared diseases, such as polio, smallpox, diphtheria, tetanus and many others. This Administration has made the development of an HIV vaccine a priority, and my HHS colleagues are working in collaboration with international partners to ensure these products will be effective against the virus strains that are predominant in Africa. A year ago, the first vaccine trial in Africa began in Uganda under the sponsorship of the NIH and carried out by Ugandan investigators. Other Phase II vaccine trials supported by the NIH are also underway in Thailand.

The utility of an HIV vaccine must take into consideration the availability of a health care system that can safely deliver the vaccine to large and often isolated populations. This remains a barrier today to the delivery of many existing vaccines in Africa and developing nations in other parts of the world. Even as we press forward to develop effective vaccines, it is imperative that we not ignore those who are already living with HIV infection. Our experience in this country has shown that developing medical systems of care for already infected persons becomes a critical component of an effective prevention effort.

CONCLUSION

The full dimensions of the unfolding AIDS crisis are becoming better understood. The need to mount an orchestrated, multifaceted and aggressive response is inescapable. Current national/country level AIDS activities in Africa must be expanded dramatically and rapidly to make a substantial impact on the course of the disease. As effective approaches are defined, we need to find ways to support their wide application, working closely with public health leaders on the front lines. Experience from some countries has shown that when governments commit their own political prestige and financial resources, involve broad aspects of society at the community level, and directly confront issues of prejudice and behaviors that hold a high risk of transmission, the rate of new infections can be slowed and communities can begin to develop more durable responses to effectively cope with the HIV epidemic. We have seen over and over again in the Western world the need for a sustained prevention-medical treatment continuum. Developing strategies that are episodic in targeting at risk populations can inevitably lead to high rates of recidivism and a resultant resurgence of new infections.

It is critical we not minimize the human side of this epidemic. The statistics describe a public health crisis that has largely gone unchecked, and do not reflect the extent of human suffering. The extraordinary human toll is evident, the millions of potentials unrealized, the expanding wave of grief that extends beyond the individual, their family and community is self-evident. As part of the Human Family, we will all be feeling the repercussions of this extraordinary human loss for generations to come. We are committed to look for every opportunity to assist African countries in their continuing efforts to end this epidemic.